



Attorney Docket No. 1460.1022D

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Takafumi Terahara, et al.

Application No.: 10/755,384

Group Art Unit: 2874

Filed: January 13, 2004

Examiner: Daniel J. Petkovsek

For: DISTRIBUTED OPTICAL AMPLIFYING APPARATUS, OPTICAL COMMUNICATION STATION, OPTICAL COMMUNICATION SYSTEM, AND OPTICAL FIBER CABLE

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 CFR § 1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the subject application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ Form PTO-1449.
- 1b. ☒ Copy(ies) of IDS citation(s), except for U.S. Patents and U.S. Patent Application publications for applications filed on or after June 30, 2003.
- 1c. ☐ English language copy of a communication(s) from a foreign Patent Office or a PCT International Search Report.
- 1d. ☐ English language translation (complete, Abstract or relevant portion(s)) attached to non-English language publications as indicated on the attached Form PTO-1449.
- 1e. ☒ Explanations of Relevancy of References (ATTACHMENT 1(e), hereto) for providing a concise explanation of non-English publications.
- 1f. ☐ List of Copending Applications (ATTACHMENT 1(f), hereto).
- 1g. ☐ List of Additional Submitted Documents (ATTACHMENT 1(g), hereto).

2. ☐ This Information Disclosure Statement is filed under 37 CFR § 1.97(b):

(Check either Item 2a or 2b or 2c or 2d)

- 2a. ☐ Within three months of the filing date of a national application;
- 2b. ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application.
- 2c. ☐ Before the mailing of a first Office Action on the merits; or
- 2d. ☐ Before the mailing of a first Office Action after the filing of a Request for Continued Examination under § 1.114.

10/21/2004 SSESHE1 00000014 10755384

180.00 0P

01 FC:1806

3. ☒ This Information Disclosure Statement is filed under 37 CFR § 1.97(c) after the period specified in paragraph 2 above but before the mailing date of any of a Final Office Action under § 1.113, a Notice of Allowance under § 1.311 or an action that otherwise closes prosecution in the application, AND
- (Check either Item 3a or 3b; Item 3b to be checked if any reference known for more than 3 months)*
- 3a. ☐ The § 1.97(e) Statement in Item 5 below is applicable; OR
- 3b. ☒ The \$180.00 fee set forth in 37 CFR § 1.17(p) is:
- ☒ enclosed.
- ☐ to be charged to Deposit Account No. 19-3935.
4. ☐ This Information Disclosure Statement is filed under 37 CFR § 1.97(d) after the period specified in paragraph 3 above, but on or before payment of the Issue Fee, AND
- 4a. ☐ The § 1.97(e) Statement in Item 5 below is applicable; AND
- 4b. ☐ The \$180.00 fee set forth in 37 CFR § 1.17(p) is:
- ☐ enclosed.
- ☐ to be charged to Deposit Account No. 19-3935.
5. ☐ Statement under § 1.97(e) *(applicable if Item 3a or Item 4a is checked)*
- (Check either Item 5a or 5b)*
- 5a. ☐ In accordance with 37 CFR § 1.97(e)(1), it is stated that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ In accordance with 37 CFR § 1.97(e)(2), it is stated that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known by any individual designated in § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
6. ☐ This is a continuation/divisional/continuation-in-part application under 37 CFR § 1.53(b).
- (Check appropriate Items 6a and/or 6b)*
- 6a. ☐ Copies of the publications listed on the attached Form PTO-1449 which were previously cited in prior application Serial No. __, filed on __, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, have been omitted pursuant to 37 CFR § 1.98(d).
- 6b. ☐ Copies of the publications listed on the attached Form PTO-1449 which were not previously cited in prior application Serial No. __, filed on __, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, are provided herewith.

7. ☐ This is a Request for Continued Examination under 37 CFR § 1.114.
(Check either Item 7a or 7b)
- 7a. ☐ The Issue Fee has not been paid.
- 7b. ☐ A Petition to Withdraw from issue under 37 CFR § 1.313(c) is filed concurrently herewith or has been granted. A Request for Continued Examination under 37 CFR § 1.114, after payment of the Issue Fee, is proper in accordance with 37 CFR § 1.114(a), respectively.
8. ☐ This is a Supplemental Information Disclosure Statement.
(Check either Item 8a or 8b)
- 8a. ☐ This Supplemental Information Disclosure Statement under 37 CFR § 1.97(f) supplements the Information Disclosure Statement filed on _____. A bona fide attempt was made to comply with 37 CFR § 1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental IDS can be considered as if properly filed on _____.
- 8b. ☐ This Supplemental Information Disclosure Statement is timely filed within one (1) month of the Notice under 37 CFR §§ 1.97 and 1.98, mailed _____.
9. ☒ In accordance with 37 CFR § 1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
(Check appropriate Items 9a, 9b, 9c and/or 9d)
- 9a. ☐ satisfied for the non-English language publication(s) cited on the enclosed "English language version of the search report or action which indicates the degree of relevance found by the foreign office". (See MPEP § 609, Minimum Requirements for an Information Disclosure Statement, Part A(3): Concise Explanation of Relevance, 8th Ed., Rev. 2)
- 9b. ☐ set forth in the application.
- 9c. ☐ satisfied for the non-English language publication(s) indicated on the attached Form PTO-1449 as having an English language translation (complete or relevant portion(s)) attached thereto .
- 9d. ☒ enclosed as Attachment 1(e), hereto.
10. No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than search report(s) from a counterpart foreign application or a PCT International Search Report, if submitted herewith). 37 CFR §§ 1.97(g) and (h).

11. The Commissioner is authorized to credit any overpayment or charge any additional fee required under 37 CFR § 1.17 for this Information Disclosure Statement to Deposit Account No. 19-3935.

Respectfully submitted,

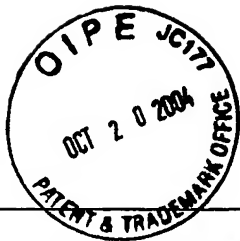
STAAS & HALSEY LLP

Dated: October 20, 2004

1201 New York Ave., N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

By: Paul I. Kravetz

Paul I. Kravetz
Registration No. 35,230



Sheet 1 of 3

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTORNEY DOCKET NO. 1460.1022D	APPLICATION NO. 10/755,384
	FIRST NAMED INVENTOR Takafumi Terahara, et al.	
	FILING DATE January 13, 2004	GROUP ART UNIT 2874

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA	5,778,128	7/7/98	Wildeman	385	123	2/11/97
	AB						
	AC						
	AD						
	AE						
	AF						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLAS S	TRANSLATION YES NO	
	AG	JP A 9- 318824	12/12/97	Japan	G02B	6/10		

OTHER REFERENCES (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

	AM	Ohhira, R., et al., "40 Gbit/s x 8-ch NRZ WDM Transmission Experiment Over 80 km x 5-Span Using Distributed Raman Amplification in RDF," ECOC'99, 26-30 September 1999, Nice, France, pp.11-176, 11-177.
	AN	Smith, N.J., et al., "Enhanced power solitons in optical fibres with periodic dispersion management," Electronics Letters, 4th January 1996, Vol. 32, No. 1, pp. 54-55.
	AO	Henmi, N., et al., "A New Design Arrangement of Transmission Fiber Dispersion for Suppressing Nonlinear Degradation in Long-Distance Optical Transmission Systems with Optical Repeater Amplifiers," Journal of Lightwave Technology, Vol. 11, No. 10, October 1993, pp. 1615-1621.

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY DOCKET NO. 1460.1022D	APPLICATION NO. 10/755,384
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)		FIRST NAMED INVENTOR Takafumi Terahara, et al.	
		FILING DATE January 13, 2004	GROUP ART UNIT 2874

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	BA						
	BB						
	BC						
	BD						
	BE						
	BF						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
	BG						
	BH						
	BI						
	BJ						

OTHER REFERENCES *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	BM	Chraplyvy, A.R., et al., "8 x 10 Gb/s Transmission Through 280 km of Dispersion-Managed Fiber," IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 5, No. 10, October 1993, pp. 1233-1235.
	BN	Kurtzke, Christian, "Suppression of Fiber Nonlinearities by Appropriate Dispersion Management," IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 5, No. 10, October 1993, pp. 1250-1253.
	BO	Henmi, N., et al., "An Arrangement of Transmission-Fiber Dispersions for Increasing the Spacing Between Optical Amplifiers in Lumped Repeater Systems," IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 5, No. 11, November 1993, pp. 1337-1340.

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY DOCKET NO. 1460.1022D	APPLICATION NO. 10/755,384
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)		FIRST NAMED INVENTOR Takafumi Terahara, et al.	
		FILING DATE January 13, 2004	GROUP ART UNIT 2874

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	CA						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
	CG						
	CH						

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	CI	Okuno, Tashiaki, et al., "Novel Lossless Optical Transmission Line with Distributed Raman Amplification," Proceedings of the 2000 Communications Society Conference of IEICE, B-10-116, with English translation.
	CJ	Smith, N.J., et al., "Energy-scaling characteristics of solitons in strongly dispersion-managed fibers," Optics Letters, vol. 21, No. 24, December 15, 1996, pp. 1981-1983.
	CK	Morita, I., et al., "40 GBIT/S x 16 WDM TRANSMISSION OVER 2000 KM USING DISPERSION MANAGED LOW-NONLINEAR FIBER SPAN," ECOC 2000, 26th European Conference on Optical Communication, Munich, Germany, September 3-7, 2000, Vol. 4, pp. 25-26.
	CL	Mukasa, K., et al., "Wide-Band Dispersion Management Transmission Line With Medial Dispersion Fiber (MDF)," ECOC 2000, 26th European Conference on Optical Communication, Munich, Germany, September 3-7, 2000, Vol. 1, pp. 95-96.
	CM	Grüner-Nielsen, Lars, et al., "Dispersion Compensating Fibres and Perspectives For Future Developments," ECOC 2000, 26th European Conference on Optical Communication, Munich, Germany, September 3-7, 2000, Vol. 1, pp. 91-96.
	CN	Okuno, Toshiaki, et al., "Novel Lossless Optical Transmission Line with Distributed Raman Amplification," ECOC 2000, 26th European Conference on Optical Communication, Munich, Germany, September 3-7, 2000, Vol. 2, pp. 75-76

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

ATTACHMENT 1(e)

EXPLANATIONS OF RELEVANCY OF REFERENCES	ATTORNEY DOCKET NO.	APPLICATION NO.
	1460.1022D	10/755,384
	FIRST NAMED INVENTOR	
	Takafumi Terahara, et al.	
	FILING DATE	GROUP ART UNIT
	January 13, 2004	2874

Reference AG (JP 9-318824) corresponds to Reference AA (U.S. Patent No. 5,778,128).